

Remarks

Claims 11, 14-19, and 48-50 are pending in the application and stand rejected under 35 U.S.C. § 102(b) as being anticipated by Holloway (U.S. Patent No. 6,040,249) or obvious in view of same. Applicant requests the Examiner withdraw this rejection as improper for at least the reason Holloway is not a 102(b) reference and to the extent Holloway qualifies as prior art, it does not teach all the elements of the pending claims.

Holloway issued March 21st, 2000. The present application claims priority to United States Patent Application Serial No. 09/633,556 filed August 7th, 2000. To qualify as a 102(b) reference Holloway had to have issued prior to August 7th, 1999, and it did not. As such Holloway is not a 102(b) prior art reference and reliance on it for 102(b) purposes must be withdrawn.

To the extent Holloway qualifies as prior art under any other theory, it does not teach all the elements of the pending claims and in fact teaches away from what the pending claims recite.

For example, claim 11 recites “thermally annealing the nitrogen within the nitrogen-enriched region, while the bare upper surface of the silicon-oxide-containing layer remains bare, to bond at least some of the nitrogen to silicon proximate the nitrogen; the nitrogen-enriched region remaining confined to the upper half of the silicon-oxide-containing layer during the annealing.”

Holloway on the other hand describes a procedure that “involves heating of the wafer with gate oxide thereon to low temperatures of from about 27 °C to about 800 °C with higher temperatures being better for higher nitrogen incorporation into the oxide.

Clearly, Holloway describes that higher temperatures means higher nitrogen incorporation, more nitrogen is incorporated while claim 11 recites that “the nitrogen-enriched region remaining confined to the upper half of the silicon-oxide-containing layer during the annealing.” Claim 11 recites confining and Holloway describes incorporating. For at least these reasons Holloway not only does not teach all the elements of claim 11, Holloway teaches away from that which is recited by claim 11. As such claim 11 is allowable in view of Holloway.

Claims 14-19 and 48-50 depend from claim 11 and are allowable for at the least the reasons given above as well as their own patentable features.

For example, claim 16 recites maintaining at a temperature of less than 200 °C during the exposing. Holloway does not describe this feature.

As other examples, claims 17 and 18 recite specific ranges of power and pressure that are not described by Holloway and when appreciated by a person of ordinary skill in the unpredictable chemical processing arts, cannot be considered obvious.

As another example, claim 19 recites a specific time limitation for the exposing that is not described by Holloway.


Further still, claims 48-50 recite temperature and time limitations that are not described by Holloway.

Claims 11, 14-19, and 48-50 are believed to be in condition for allowance and Applicant requests allowance of claims 11, 14-19, and 48-50 in the Examiner’s next action. If the Examiner’s next anticipated action is to be anything other than a Notice of Allowance, the Examiner is requested to

contact the undersigned at (509) 624-4276 between 8:00 a.m. and 5:00 p.m.
(PST).

Respectfully submitted,

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By: 
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